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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,706	01/27/2004	Wang Long Zhou	16188	3824
43309	7590	08/18/2006	EXAMINER NGUYEN, DUNG T	
SILLS CUMMIS EPSTEIN & GROSS P.C. ONE RIVERFRONT PLAZA IP DEPARTMENT NEWARK, NJ 07102			ART UNIT 2828	PAPER NUMBER

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/766,706	ZHOU, WANG LONG
	Examiner Dung (Michael) T. Nguyen	Art Unit 2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 27 July 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 7, 9 and 21-25 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6, 8, 10-20 and 26-30 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 January 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of Species II (claims 8 and 20) in the reply filed on 07/27/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-6, 8, 10-12, 16-20, and 26-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Gendron (2004/0190563).

With respect to claims 1, 8, 10-12, 16, 20, 26, and 29, Fig.1 shows a laser device having a laser medium in a resonator cavity comprising:

- a) means (para.0021) for pumping energy into said laser medium 3 (Nd:YAG) to increase gain of said laser device;
- b) active Q-switch means 4 (EO crystal in para.0018) having open and close states for controlling loss modulation of said resonator cavity; and,

c) passive Q-switch means (Cr:YAG saturable absorber) for further controlling loss modulation of said resonator cavity, wherein loss modulation control from active and passive Q-switch means enable generation of a short width, high peak power pulse at a lasing wavelength (para.0018-0034).

With respect to claims 2-5, 17-19, and 27-28, para.0023-0034 disclose all the functional limitations as recited in the claims.

With respect to claims 6 and 30, para.0023 discloses means (electronic driver) for triggering the active Q-switch.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gendron (2004/0190563) in view of Filgas et al. (7065121).

With respect to claim 3, Gendron disclose all limitations of the claim except for the pulse width from 50ps to 10ns.

Filgas teach the pulse width of 1ns in Table 1.

it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Gendron what is taught by Filgas to have a laser system be used in the material processing such as laser firing to a target with a pulse width with a very short duration (col.21, l.11-27).

With respect to claims 13-15, Filgas teach in fig.8 the solid state laser (Nd:YAG) and the solid state saturable absorber (Cr:YAG) 800 are integrated /bonded (col.1-11).

it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Gendron what is taught by Filgas to produce a compactly monolithic laser device (col.21, l.21-25).

### Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

*Michael Dung Nguyen*  
Michael Dung Nguyen  
7/12/06